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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/197,080	11/20/1998	GALEN C. HUNT	3382-51187	9889

7590   10/29/2003

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EXAMINER
PATEL, HARESH N

ART UNIT	PAPER NUMBER
2126	

DATE MAILED: 10/29/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____ .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-45</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) <u>20-45</u> is/are allowed.

6)☒ Claim(s) <u>1-15 and 19</u> is/are rejected.

7)☒ Claim(s) <u>16-18</u> is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>20 November 1998</u> is/are: a)☐ accepted or b)☒ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

    If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____ .

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

    a) ☐ The translation of the foreign language provisional application has been received.

15)☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .

4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: .

DETAILED ACTION

1.   Claims 1-46 are presented for examination.

Priority

2.   Applicant's claim for domestic priority under 35 U.S.C. 119(e) is acknowledged.

Specification

3.   The following guidelines illustrate the preferred layout for the specification of a utility

application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include
the following sections in order. Each of the lettered items should appear in upper case, without
underlining or bold type, as a section heading. If no text follows the section heading, the phrase
"Not Applicable" should follow the section heading:

      (a) TITLE OF THE INVENTION.
      (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
      (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR
           DEVELOPMENT.
      (d) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A
           COMPACT DISC (See 37 CFR 1.52(e)(5) and MPEP 608.05. Computer program
           listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables
           having more than 50 pages of text are permitted to be submitted on compact
           discs.) or
           REFERENCE TO A "MICROFICHE APPENDIX" (See MPEP § 608.05(a).
           "Microfiche Appendices" were accepted by the Office until March 1, 2001.)
      (e) BACKGROUND OF THE INVENTION.
           (1) Field of the Invention.
           (2) Description of Related Art including information disclosed under 37 CFR 1.97
           and 1.98.
      (f) BRIEF SUMMARY OF THE INVENTION.
      (g) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
      (h) DETAILED DESCRIPTION OF THE INVENTION.

(i) CLAIM OR CLAIMS (commencing on a separate sheet).
(j) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
(k) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence
   Listing" is required on paper if the application discloses a nucleotide or amino
   acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence
   Listing" is not submitted as an electronic document on compact disc).

The disclosure is objected to because of the following informalities:

i.   The section "CROSS-REFERENCE TO RELATED APPLICATIONS" is

missing co-pending applications.

ii.   The "Field of the Invention" sub-section of the "BACKGROUND OF

THE INVENTION" does not clearly specify the claimed invention.

iii.   The description of the prior art figures 1-3 and all the known prior art of

the "DETAILED DESCRIPTION OF THE INVENTION" section, which is not

the new invention matter, needs to be moved into the sub-section "Description of

Related Art" of the "BACKGROUND OF THE INVENTION" section.

iv.   The sub-section "Description of Related Art" of the "BACKGROUND OF

THE INVENTION" section does not contain necessary known prior art

information considering the supplied IDS material.

4.   The title of the invention is not descriptive. A new title is required that is clearly

indicative of the invention to which the claims are directed.

The following title is suggested: "System and method to minimize application

distribution cost by automatic distribution of the application parts among the network-

independent distributed computing environment".

5.   Applicant is reminded of the proper content of an ab stract of the disclosure.

        A patent abstract is a concise statement of the technical disclosure of the patent and
should include that which is new in the art to which the invention pertains. If the patent is of a
basic nature, the entire technical disclosure may be new in the art, and the abstract should be
directed to the entire disclosure. If the patent is in the nature of an improvement in an old
apparatus, process, product, or composition, the abstract should include the technical disclosure
of the improvement. In certain patents, particularly those for compounds and compositions,
wherein the process for making and/or the use thereof are not obvious, the abstract should set
forth a process for making and/or use thereof. If the new technical disclosure involves
modifications or alternatives, the abstract should mention by way of example the preferred
modification or alternative.

        The abstract should not refer to purported merits or speculative applications of the
invention and should not compare the invention with the prior art.

        Where applicable, the abstract should include the following:
(1) if a machine or apparatus, its organization and operation;
(2) if an article, its method of making;
(3) if a chemical compound, its identity and use;
(4) if a mixture, its ingredients;
(5) if a process, the steps.

        Extensive mechanical and design details of apparatus should not be given.

        The abstract of the disclosure is objected to because it does not contain computer

terminology and is not properly understood. Key terms involved in the invention like IDL, DLL

and distributed system components of the invention are missing in the abstract. Also the abstract

does not clearly state the goal of the invention, example, minimizing application distribution cost

among the distributed systems. Correction is required. See MPEP § 608.01(b).

Drawings

6.   Figures 1-3 should be designated by a legend such as --Prior Art-- because only that

which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected

drawings are required in reply to the Office action to avoid abandonment of the application. The

objection to the drawings will not be held in abeyance.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington,* 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-19 are rejected under the judicially created doctrine of obviousness-type double

patenting as being unpatentable over claims 12-34 of U.S. Patent No. 6,263,491. Although the

conflicting claims are not identical, they are not patentably distinct from each other because the

patent teaches all the limitations as disclosed such that the interpretation of the reducing the

metadata description and re-executing the application using the reduced metadata is similar to

reconfiguring the application based on the application profile.

Claims 20-45 are rejected under the judicially created doctrine of obviousness-type

double patenting as being unpatentable over claims 1-28 of U.S. Patent No. 6,381,628. Although

the conflicting claims are not identical, they are not patentably distinct from each other because

the patent teaches all the limitations as disclosed such that the interpretation of the network

independent description is the static metadata description.

Claims 1-19 are rejected under the judicially created doctrine of obviousness-type double

patenting as being unpatentable over claims 1-61 of U.S. Patent No. 6,381,735. Although the

conflicting claims are not identical, they are not patentably distinct from each other because the

patent teaches all the limitations as disclosed such that the interpretation of the re-executing the

application using the new component of the user profile is similar to reconfiguring the

application based on the application profile.

Claim Rejections - 35 USC § 102

7.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8.   Claims 1-15 and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by

applicant's admitted prior art (AAPA).

9.   As per claims 1-15 and 19, AAPA teaches the following:

a method for profiling an application having plural units, wherein the plural units

communicate across strongly-typed, binary-standard interfaces, and wherein a type file describes

the interfaces of the plural units, the method comprising:

generating a structural metadata description of the application from the type file (e.g.,

After analyzing the structure of procedures and parameters in the source code of an application,

metadata describing the structure of an application 20 was generated from the application source

code, page 4, lines 14 - 30), wherein the structural metadata description comprises compiled

interface-level type description (e.g., system-defined object interfaces, Distributed object

systems such as Microsoft Corporation's Distributed Component, Object Model (DCOM) and the

Object Management Group's Common Object Request Broker Architecture (CORBA) provide

system services that support execution of distributed applications, col. 3, lines 15 – 20),

profiling the application using the structural metadata description, resulting in an

application profile (e.g., Using this metadata, these ADPSs profiled the application and generate

a communication model for the application, page 4, lines 14 – 30); and

reconfiguring the application based on the application profile (e.g., The Interconnected

Processor System (/COPS) is an example of an ADPS designed in the 1970's. The Configurable

Applications for Graphics Employing Satellites (CAGES) also supports creation of distributed

applications, 25 but does not support automatic application profiling at all. A more recent

example of an ADPS is the Intelligent Dynamic Application Partitioning (/DAP) System. /DAP

generates from application source code an instrumented version of the application for execution

in profiling scenarios, then generates from application source code another version of the

application for distributed execution, col. 4, lines 14 – 30).

receiving a source code type description of the interfaces; statically analyzing the source

code description; and producing the structural metadata description of the application (e.g., After

analyzing the structure of procedures and parameters in the source code of an application,

metadata describing the structure of an application 20 was generated from the application source

code. Using this metadata, these ADPSs profiled the application and generate a communication model for the application, page 4, lines 15 – 30),

receiving a compiled type file comprising information descriptive of the interfaces; and producing the structural metadata description of the application (e.g., After analyzing the structure of procedures and parameters in the source code of an application, metadata describing the structure of an application 20 was generated from the application source code. Using this metadata, these ADPSs profiled the application and generate a communication model for the application, page 4, lines 15 – 30),

determining static relationships between the plural units of the application; and generating the application profile, wherein the application profile models the static relationships (e.g., After analyzing the structure of procedures and parameters in the source code of an application, metadata describing the structure of an application 20 was generated from the application source code. Using this metadata, these ADPSs profiled the application and generate a communication model for the application, page 4, lines 15 – 30),

determining dynamic interaction between the plural units of the application through interfaces described in the interface-level type description; and generating the application profile, wherein the application profile models the dynamic interaction (e.g., A more recent example of an ADPS is the Intelligent Dynamic Application Partitioning (/DAP) System, page 4, lines 15 – 30),

measuring the number and size of communications through the interfaces of the plural units using the structural metadata description of the application; and generating the application profile, wherein the application profile is a log of the communications between the plural units

(e.g., An application profile is a model of an application. The application profile can include the

units of an application and/or the costs of communication between10 units of the application

according to expected usage patterns, page 5, lines 8 – 22),

measuring the size of communications through the interfaces of the plural units using the

structural metadata description of the application; and generating the application profile, wherein

the application profile is a log of the communications between the plural units (e.g., An

application profile is a model of an application. The application profile can include the units of

an application and/or the costs of communication between10 units of the application according to

expected usage patterns, page 5, lines 8 – 22),

the log stores data representing a sending unit, a receiving unit, and the size of the

communication (e.g., An application profile is a model of an application. The application profile

can include the units of an application and/or the costs of communication between10 units of the

application according to expected usage patterns, page 5, lines 8 – 22),

timing communications sent between the plural units; and generating the application

profile, wherein the application profile is a log of the communications sent between the plural

units (e.g., An application profile is a model of an application. The application profile can

include the units of an application and/or the costs of communication between10 units of the

application according to expected usage patterns, page 5, lines 8 – 22),

timing the execution of the plural units; and generating the application profile, wherein

the application profile describes the behavior of the plural units (e.g., An application profile is a

model of an application. The application profile can include the units of an application and/or the

costs of communication between10 units of the application according to expected usage patterns, page 5, lines 8 – 22),

the application is available for profiling only as an application binary, (e.g., Internal distribution 5 mechanisms typically modify the application to be distributed in various ways, page 4, lines 1 – 30),

the application binary comprises an executable file, (e.g., Internal distribution 5 mechanisms typically modify the application to be distributed in various ways, page 4, lines 1 – 30),

the application binary further comprises one or more dynamic link libraries (e.g., Internal distribution 5 mechanisms typically modify the application to be distributed in various ways, page 4, lines 1 – 30),

analyzing the application profile; and modifying the application based on the analysis of the application profile (e.g., Internal distribution 5 mechanisms typically modify the application to be distributed in various ways, page 4, lines 1 – 30),

analyzing the application profile; generating a distribution plan; and during execution of the application, distributing the plural units of the application in a distributed computing environment according to the distribution plan (e.g., Internal distribution 5 mechanisms typically modify the application to be distributed in various ways, page 4, lines 1 – 30).

Allowable Subject Matter

10.   Claims 16-18 are objected to as being dependent upon a rejected base claim, but would

be allowable if rewritten in independent form including all of the limitations of the base claim

and any intervening claims.

11.   Claims 20-45 are allowed.

The following is an examiner's statement of reasons for allowance:

No other prior art teaches combining the generated application profile with the

characteristics of the network (i.e. network profile) and then to further analyze and generate the

distribution plan.

Any comments considered necessary by applicant must be submitted no later than the

payment of the issue fee and, to avoid processing delays, should preferably accompany the issue

fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for

Allowance."

Conclusion

12.   The prior art made of record and not relied upon is considered pertinent to applicant's

disclosure.

See Form PTO-892.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Haresh Patel whose telephone number is (703) 605-5234. The

examiner can normally be reached on Monday-Friday from 8:00 am to 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, John Follansbee, can be reached at (703) 305-8498.

The appropriate fax phone number for the organization where this application or

proceeding is assigned is (703) 306-5404.

Any inquiry of a general nature or relating to the status of this application or proceeding

should be directed to the receptionist whose telephone number is (703) 305-3900.

Haresh Patel

October 2, 2003.

JOHN FOLLANSBEE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100